REMARKS

In the disclosure of the present specification Applicants identify numerous prior art sizing compositions that contain cationic materials (see for example the discussion relating to US 3,223,544; WO 96/26318; and WO 98/41565 on page 1 and 2). The prior art compositions require the inclusion of alkyldiketenes as stabilizers to form protective colloids. None of these prior art compositions are free alkyl diketenes. It would make no sense to remove the alkyldiketenes from these compositions because doing so would cause stability and/or performance problems.

Applicants' Amendment submitted on July 29, 2009 included arguments pointing out that the original specification includes factual evidence probative of the patentability of the presently claimed invention. In particular, Applicants' disclosure includes a description of the discovery of a solution to a long-existing problem in the sizing industry. Applicants discovered and disclosed in the present specification that the performance of a reactive size such as that described in the present claims can be substantially improved if the amount of diketene is substantially eliminated from the size (e.g., if the amount of diketene is 0.0001% or less).

Applicants thank Examiner Johnson for discusing the present case with Applicants' U.S. representative on December 4, 2009. During the discussion Applicant's representative pointed out that the data of the original disclosure constitutes more than a showing of unexpected results. The data support the inventiveness of Applicants' work by evidencing the discovery of the source of a long-standing problem in reactive sizing compositions.

The Office's obligation to consider such information in support of the non-obviousness of a claimed invention is set forth in the Office's administrative procedures.

Applicants draw the Office's attention to MPEP § 2141.02 reproduced below, in part, for convenience (emphasis added):

"[A] patentable invention may lie in the discovery of the source of a problem even though the remedy may be obvious once the source of the problem is identified. This is <u>part</u> of the "subject matter as a whole" which should always be considered in determining the obviousness of an invention under 35 U.S.C. § 103." *In re Sponnoble*, 405 F.2d 578, 585, 160 USPQ 237, 243 (CCPA 1969). However, "discovery of the cause of a problem . . . does not always result in a patentable invention. . . . [A] different situation exists where the solution is obvious from prior art <u>which contains the same solution for a similar problem</u>." *In re Wiseman*, 596 F.2d 1019, 1022, 201 USPQ 658, 661 (CCPA 1979) (emphasis in original).

Applicants set forth a detailed explanation of the evidence of the original specification and its relation to Applicants' discovery of the source of a problem long-plaguing reactive sizes in the July 29, 2009 Amendment (see pages 6-7). The Office mischaracterizes Applicants' arguments in support of patentability and essentially abrogates its obligation to consider Applicants' evidence.

Further, the Office's basis for maintaining the rejection is legally improper. For example, the Office characterizes Applicants' discovery of the source of a problem as "unexpected results" and then asserts that such evidence is nonetheless not probative of patentability. The Office states:

In response to applicant's argument that the use of a vinylamine containing polymer that is free of diketenes as a protective colloid provides unexpected results, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. (citations omitted). In the instant case, the use of a diketene free vinylamine containing protective colloid is obvious over the disclosure of Downey and Lenney. The composition produced as a result of the teachings of the prior art would necessarily possess the improved properties.

See the paragraph bridging pages 7 and 8 of the November 17 Office Action.

As already mentioned above, the Office's characterization of Applicants' evidence in support of patentability is not correct. Applicants disclosed the discovery of the source of a

long-standing problem with respect to reactive sizings. There is no indication that the Office gave this information any weight in considering the patentability of the presently claimed invention. Thus, the rejection is improper for at least a first reason.

The Office further appears to take the position that Applicants evidence cannot rebut a prima facie case of obviousness because the unexpected results would be expected to flow naturally from the suggestion of the prior art. The Office's statement is legally not correct. If the Office were correct, it would be impossible to ever rebut an allegation of obviousness with a showing of unexpected results.

The Office's assertions in this regard are manifestly incorrect and serve no purpose but to further avoid the Office's obligations with respect to considering Applicants' factual evidence in support of patentability. The Office's basis for maintaining the rejection is thus further improper.

With respect to the obviousness-type double patenting rejection, Applicants point out that the present case is the senior case with respect to the co-pending application 11/720,362. In view of the fact that the obviousness-type double patenting rejection is a provisional rejection, withdrawal of the rejection from the present application is appropriate on identification of allowable subject matter.

Applicants thus request withdrawal of the rejection for the reasons set forth above and the entry of any obviousness-type double patenting rejection in the co-pending application, if appropriate.

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For the reasons discussed above in detail, Applicants request withdrawal of the rejection and the allowance of all now-pending claims.

Respectfully submitted,

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